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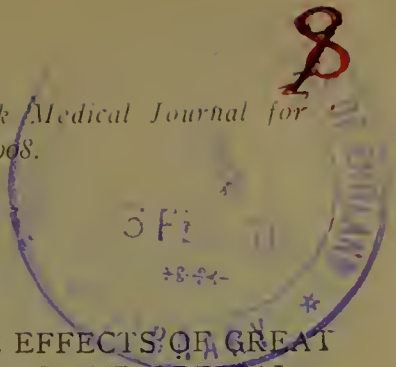

ATTEMPTS TO REPAIR THE EFFECTS OF GREAT DESTRUCTION OF THE LIDS AND ORBITAL TISSUES CAUSED BY DISEASE OF THE ANTRUM.*

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The early history of this case, without which I could not have understood the cause of the awful conditions present when I first saw the patient, was given me by Dr. Beaman Douglass, of New York, and I now express my obligation to him for the information. The young woman had had a disease of the left antrum which had been caused probably by infection from a decayed molar tooth. The disease spread into the orbit after necrosis of the roof of the antrum. Orbital cellulitis followed, and later the eyelids became the seat of numerous abscesses. In a short time panophthalmitis occurred, and the eyeball had to be removed.

Dr. Douglass opened the antrum, which he found filled with infected granulation tissue. After thoroughly curetting this cavity he removed all of the necrotic bone, thus enlarging the opening into the orbit and establishing communication into the middle nasal meatus. The abscesses in the lids were

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opened and drained; other incisions were made to ascertain the state of the frontal and the ethmoidal sinuses. Here all the osseous tissues and spaces were healthy, and they were left undisturbed. Drainage tubes were placel in the opening between the orbit and the antrum, and these cavities were drained. Further treatment consisted in frequent cleansing and of the removal of redundant granulations. Dr. Douglass viewed this as one of the most interesting accessory sinus cases he had ever had, and he could hardly believe it possible for so great destruction to follow disease of the antrum.

The patient was a well devcloped young woman. Ovcr her left orbit she wore a thick black silk patch. On her check were several scars; one as though it were the cicatrix of an incision, others as though from excoriations, while along the superior orbital ridge were those from the exploratory incisions over the frontal and ethmoidal regions. The globe had been removed. The orbit was partially filled in by soft tissues adherent to the muscular pyramid. There was sufficient movement of the mass to justify the assumption that the ocular muscles had not been entirely destroyed. The upper lid, which was greatly distorted and stretched, was firmly adherent to the roof of the orbit. The inner two thirds were without lashes or ciliary border; the outer third was puckered, and from the edge projected distorted cilia. The lower lid had becn drawn downwards, and with the skin and facia had bccome firmly adherent to the orbital border. Here, surrounded by numerous radiating cicatricial bands, was a sinus leading from a pocket in the orbit and discharging on the cheek. The antrum was drained by a small opening into the nasal cavity, and through the socket of a molar tooth into the mouth. Fœtid pus exuded from all these sinuous tracts.

Thc whole aspcct was most pitiful. The young woman besought me to stop the annoying discharges, and expressed the hope that some prosthetic effect might be obtained by repairs to the orbit.

My first efforts were directed towards thorough cleansing of the cavities and the maintenance of drainage. The patient was most wilful and unmanageable. She persisted in wearing the patch which created a brood oven out of the orbital cavity and excited irritation of the surrounding skin surfaces.

I sent her to Dr. John B. Roberts for suggestions as to restorative plastic operations, but even to one so experienced as he the conditions were formidable and discouraging. The patient was entirely willing to submit to a series of operations without demanding my assurance of definite results. Accordingly she was admitted to the Germantown Hospital. After complete ether anæsthesia I examined the orbital cavity in a way in which I could not have done it before. The lids were not united to the floor and to the roof of the orbit throughout their whole extent, but only here and there, the contiguity being interrupted by sinuous tracts which led to the deeper conjunctival sacs, where the mucous membranes were apparently preserved. The tarsal cartilages had been damaged by the suppurative processes. Bands of adhesions had formed between the lid margins and the orbital tissues which had retracted so greatly as to draw the lids far into the orbit. The inner third of the lower tarsal border had been destroyed. There were no signs of the lacrimal punctum or caruncle, nor of the sac of the inner fornix. The apex of the orbit was filled with the remains of the extraocular tissues. The sinus opening into the cheek communicated with several pockets containing putrid secretion.

After this survey I determined on a plan providing for a series of operations, some of which had been suggested by my friend Dr. Roberts. In the performance of the operations I was given much help by Dr. Charles Plank, the senior resident of the hospital, and here I wish to express my obligation to him for his patient care of the woman while she remained in the wards.

The first operation consisted in carefully dissecting the lids free from all adhering bands so that they hung over the orbit like loose flaps. Greater mobility of the lids was gained by an external canthotomy, and more space was obtained in the orbit by the severance of the larger distorting bands. As the lacrimal punctum could not be found, a stout conical probe was forcibly pushed through the soft tissues and entered into the duct. A thick lead style was inserted afterwards and passed down into the floor of the

meatus and left in the duct, the upper end of it bent and embedded in the soft tissues of the orbit. The sinus into the cheek was not disturbed, but was left to drain the excessive secretions from the orbit.

A piece of sheet lead was fashioned and placed over the base of the orbit. This plate fitted into the angles corresponding to the retrotarsal space. Then, with the hope of effecting an anchyloblepharon, the lids were drawn over the convex surface of the plate, and, their edges freshened, they were united by interrupted sutures.

The reaction following these procedures was intense; great œdema of the lids persisted and the patient complained greatly of pain. In a week, because the sutures broke loose, the lead plate was withdrawn and a ball of hard paraffin was inserted in the cavity. Simple dressings were used and firm pressure applied. The sinus in the lid was swabbed with pure carbolic acid. After a week the paraffin was removed. There was decided healing of the raw surfaces, the discharge had lessened, and it was noticed that the orbital mass could be moved more freely than was the case before the operation. The skin on the cheek was beginning to heal. In general terms a distinct benefit had been gained.

An attack of quinsy supervened and in a few days the patient asked to be allowed to go to her home. In a fitful way she applied for treatment of the antrum to Dr. Carle L. Felt to whom I had recommended her.

When the parts were examined three weeks later much of the raw surface was found to be healed, and there was considerable retraction and distention of the tissues. Again the adhesions were broken and another lead disk was inserted over which the eyelids were united by silk and catgut sutures. Only slight reaction ensued and in ten days the results were more satisfactory than at the earlier operation. The eyelids were not united in their entire extent, yet they covered the orbital outlet. The fistulous tract into the cheek was closed and the site of it had become adherent to the inferior orbital margin.

There were reasons for believing that the patient had received a luetic infection two or three years previously. Because of this, and because of the great value I believe mercury has as an antiseptic, applications of mercurial ointment were made daily for several weeks. The woman's health improved rapidly; the antral discharges diminished and lost their fœtid odor.

After an interval of three weeks attempts were made to repair the distorted upper lid. Adhesions were broken, and exuberant granulations were removed. An incision was made in the lid above the point in the border where the distorted portion joined the natural. Again a lead style was inserted into the lacrimal duct. An ordinary glass shell was placed in the orbit and the lids were sewed together over it. Iced bichloride compresses were applied without interruption for three days. But little swelling or discharge followed, though the parts were tender and the patient complained of considerable pain.

At the end of a week the sutures were removed. There was firm union in the inner third, but less firm in the outer. In spite of the great mutilation that had taken place in the tarsal cartilages there was a noticeable, indeed even marked, movement of the two lid flaps. The lower flap was composed of the cutaneous and subcutaneous tissues of the facial region, together with the inner fibers of the orbicular muscle. The upper flap included similar tissues in the inner portion and contained a very much distorted tarsal cartilage in the outer.

At the end of another week the tissues conformed quite regularly over the temporary glass shell. The tarsal border had become more extensive; the canthoplastics had increased the general dimensions of the fissures, and the dense cicatrization in the tissues at the lower border had favored the eversion of the lower flap.

One month later a gold sphere was inserted beneath the muscular cone of the orbital mass. The metal conformer excited pain and induced considerable discharge, so that by the end of a week it had to be removed, at which time the sutures were withdrawn.

The patient was discharged from the hospital on November 15, 1904. After another month of irregular attention, she disappeared and has not presented herself again. When I saw her the last time the lower lid had become adherent to the orbital mass, but the sphere had so molded it that the upper lid had become decidedly convex and overhung the lower lid. There was at that time a resemblance to a tarsal border along the upper lid. The cavity was drained perfectly by the nasal duct, and the antral discharge had ceased.

Mr. Joseph Ferguson contrived a pair of spectacles containing large periscopic lenses, the left having ground surfaces, which greatly obscured the disfigurement; but the lady discarded them for the black patch of earlier days.

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